33. The Tenderers shall also mention with their Tender Documents the Name of [illegible] Work Managers, Graduate Engineers who shall be engaged in this Work [illegible] Engineers / Managers are to be enclosed with the Tender Documents.

34. The Tenderers may specify the Number and Category of each type of Skilled Person [illegible] by the Contractors. It may clearly be stated as to whether such Skilled Persons [illegible] Employment of the Tenderers or are still to be appointed by them. The Number [illegible] Unskilled Persons to be employed shall be in agreement with the Programme of Work [illegible] the Tenderers and discussed elsewhere in the Tender Documents.

35. The Employer might deploy Project Management Consultant (PMC) for Design Check, Approval, Supervision, Quality Control, Progress Monitoring, etc. The Contractor shall abide by Instructions / Suggestions given by the PMC for the successful completion of the Project.

36. **Interference with Traffic and Adjoining Properties**

a. All Operations necessary for the Execution and Completion of the Works and the Remedying any Defects therein shall, so far as Compliance with the Requirements of the Contract Permits, be carried out so that not to interfere unnecessarily or improperly with the following.

i. The Convenience of the public, or

ii. The Access to, Use and Occupation of Public or Private Roads and Footpaths or [illegible] Properties whether in the Possession of the Employer or of any other person.

b. In case any Operation connected with the Traffic necessitates Diversion, Obstruction or Closure of any Road, Railway or any other Right of Way, the Approval of the Employer and the Concerned Authorities shall be obtained well in advance by the Contractor.

37. **Avoidance of Damage to Roads**

The Contractor shall use every Reasonable Means to prevent any of the Roads, Bridges communicating with or on the Routes to the Site from being damaged, injured by any Traffic of the Contractor or any of his Sub Contractors and in particular, shall select Routes, choose and use Vehicles and restrict and distribute Loads so that any such Extraordinary Traffic as will inevitably arise from the Moving of Materials, Plant, Contractor's Equipment or Temporary Works from and to the Site shall be limited, as far as reasonably possible, and so that no Unnecessary Damage or Injury may be occasioned to such Roads and Bridges.

38. **Transport of Contractor's Equipment or Temporary Works**

a. The Contractor shall be Responsible for and shall pay the Cost of Strengthening any Bridges or altering or improving any Road communicating with or on the Routes to the Site to facilitate the Movement of Contractor's Equipment or Temporary Works and the Contractor shall indemnify and keep indemnified the Employer against all Claims for Damage to any such Road or Bridge caused by such movement, including such Claims as may be made directly against the Employer, and shall negotiate and pay such Claims arising solely out of such Damage.

b. If it is found necessary for the Contractor to move one or more Loads of Heavy Constructional Plant and Equipment, Materials or Parts of Units of Work over Roads, Highways, Bridges on which such Oversized and Overweight Items are not normally allowed to be moved, the Contractor shall obtain Prior Permission from the Concerned Authorities. Payments for complying with the Requirements, if any, for Protection of or Strengthening of the Roads, Highways or Bridges shall be made by the Contractor and such expenses shall be deemed to be included in his Contract Price.

39. **Personal Protective Equipment**

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The Contractor shall at all times keep and maintain an adequate supply of suitable Personal Protective Equipment, which shall be readily available for use at all times on the site and would include but not to be limited to the following Items.

- Safety Helmets.
- Hearing Protection.
- Respiratory Protection.
- Eye Protection.
- Protective Gloves.
- Safety Footwear.
- High Visibility Clothing conforming to BS EN 471 Class 3 Standards.

All Sites shall be designated as HARD HAT and SAFETY BOOTS SITES and as such an adequate supply of Safety Helmets and Safety Boots shall be kept available for use by all Staffs, Workers and Authorised Visitors to the Sites.

The Contractor shall remove from the Site any worker who consistently refuses to wear the appropriate Personal Protective Equipment.

All Workmen at Site shall be provided with Safety Helmets and Yellow / Orange Jackets. Workmen required on Site during night hours shall be provided with Fluorescent Yellow Jackets with Reflective Lopes. Workers employed on mixing Asphaltic Materials, Cement, Lime Mortars, Concrete, etc. shall be provided with Protective Footwear, Protective Goggles. Those engaged in handling any Material, which is injurious to the eyes, shall be provided with Protective Goggles. Those engaged in Welding Works shall be provided with Welder's Protective Eye Shield. Stone Breakers shall be provided with Protective Goggles and Protective Clothing and seated at sufficiently safe intervals.

40. First Aid

The Contractor shall maintain, at every Work Place, in a readily accessible place First Aid Appliances including an adequate supply of Sterilised Dressings, Bandages, Sterilised Cotton Wool, Eye Irritation Sterile Solution, Disposable Gloves, Ointments for Burns / Cuts, Pressure Dressings, Paper Towels, General Purpose Medicines, etc. as prescribed in the Factory Rules of the State in which the Work is being carried out. The Appliances shall be kept in good order and in large work places. They shall be placed under the charge of the Safety Officer deputed by the Contractor for this Work and the Safety Officer shall be readily available during Working Hours. In each Site Office and Location one Person, suitably trained in First Aid, shall be available at all Working Hours for the purpose of attending to emergencies.

41. Fire Precautions

The Contractor shall be responsible for supplying and maintaining adequate Fire Precaution Facilities on all the Work Sites. The following minimum Standards shall be adhered to.

- The Contractor shall ensure that specially trained personnel are available to deal with fires due to Electrical Causes, Gas Explosions, etc.
- A Good Standard of Housekeeping shall be maintained at all times on the Sites.
- No Accumulations of Rubbish shall be allowed to gather.
- Combustible Scrap and other Construction Debris shall be disposed off site on day – to – day basis. If Scrap is to be burnt on site, the burning site shall be specified and located at a distance no less than 50m from any Construction Work or any other Combustible Materials.
- Signage shall be erected at prominent positions showing the correct use of Portable First Aid Fire Extinguishers.
- Emergency Plans and Fire Evacuation Plans shall be prepared and issued. Mock Drills shall be held on a regular basis to ensure the Effectiveness of the Arrangements.

42. Fire Fighting Equipment

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At various locations around the Site, clearly visible Fire Points shall be ex... Emergency and each Fire Point should have available as a minimum th... Equipment.

- Dry Powder Extinguisher.
- Water Type Extinguisher.
- Bucket of Sand.

Recharging of Fire Extinguishers and their Proper Maintenance should be ... minimum should meet Indian National Standards.

The Telephone Number of the Local Fire Brigade along with other Emergency Numbers (... Police Stations, Ambulance, etc.) shall be displayed near each telephone on Site. Suppl... Workmen at the Site should be trained in the Use of Fire Fighting Equipment provided at ...

43. **Storage of Flammable Liquid**

All Flammable Liquids shall be kept in a Secure Fire Resistant Store protected from Fl... Sparks, Welding Sparks, Open Flames and Smoking. Only such amounts of Flammable L... shall be issued as are required for immediate use.

Cans for carrying Flammable Liquids shall be leak proof and properly stoppered and clearly marked "Flammable Liquid".

Rags soaked in Paints, Kerosene and other Flammable Liquids shall be disposed of daily under supervision. Large quantities of such rags shall not be allowed to accumulate.

All Diesel Fuel Storage Tanks shall be bunded around in order to control any Spillage or Leakage that may occur.

"No Smoking" Signs shall be prominently displayed at all areas where Flammable Materials are stored.

44. **Defect Liability Period**

The Defect Liability Period for which the Various Items of Works executed to be maintained shall be as follows.

a. If the Asphalted layer is less than or equal to 40 mm thick, the Defect Liability Period is for 1 year and maintenance period is for 2 years
b. If the Asphalted layer is more than 40 mm thick, then the Defect Liability Period is for 3 year and Nil maintenance period.
c. All the Civil Works executed other than the Asphalted Surface shall be maintained for a Defect Liability Period of 12 months.

Further, the Defect Liability Period will run concurrently from the Date of the Physical Completion of the Project and on issuance of Completion Certificate by the Competent Authority.

45. **Release of Performance Security**

50% of Performance Security shall be released only after satisfactory completion of Defect Liability Period and the balance 50% shall be released only after satisfactory completion of maintenance period .

46. **Site Office**

The Contractor shall provide and maintain Furnished Site Office at the Project Location for the Supervisory Staff of the Employer and his approved Representative.

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It shall have minimum 40 Sqm of Floor Area and shall include all Items like Electric Supply, Electrical Items, Telephones, Lights, Fans and Complete Wiring, Drinking Water Supply and Hygienic Toilet Facilities completed along with Furniture as per the Specification given in **Section 100 of MoRT&H, Specifications for Road and Bridge Works (Fourth Revision)**.

47. **Field Laboratory**

The Contractor shall provide and maintain adequately equipped Field Laboratory as required for Site Control on the Quality of Material and the Works. It shall have a minimum of 40 Sqm Area. The Field Laboratory shall be located as directed by the Employer or his approved Representative. It shall be provided with Amenities like Water Supply, Electric Supply, etc. The Laboratory will have all Services, Furniture, Equipments, etc. as per the Specification given in **Section 100 of MoRT&H, Specifications for Road and Bridge Works (Fourth Revision)**.

48. The Right to carry out the Work either in Conformity with or in a Manner entirely different from the Terms of this Tender Document that may be considered most suitable before or subsequent to the Receipt of Tenders due to Exigencies of Work is reserved with the Employer.

49. **Progress of Work**

The Contractor shall give the Employer on the 4th Day of each Month a Progress Report of the Work done during the Previous Month.

The Progress of Work will be reviewed periodically by the Employer with the Contractor and Shortfalls, if any sorted out, the Contractor shall thereupon take such Action that may be necessary to bring back his Work to Schedule without any Additional Cost to the Employer by employing Overtime Operations, increasing the Number of Shifts, Capacity of the Equipment or otherwise as directed by the Employer and nothing shall be paid extra.

50. In the case of the death of a Contractor after executing the Agreement / Commencement of the Work, his Legal Heir, if an Eligible Registered Contractor and willing, can execute and complete the work at the accepted Tender Rates irrespective of the Cost of the Work.

The Employer shall have the right to verify all the Men and Machinery Details / Documents submitted by the Tenderer at any point of time during Technical Evaluation of the Tender Document.

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Annexure:A

LIST OF ORGANIZATIONS WHO ARE CONSIDERED AS APPOINTING AUTHORITY FOR APPOINTMENT OF ARBITRATORS[6]

1. Indian Council of Arbitration, New Delhi;
2. International Centre for Alternative Disputes Resolution (India);
3. Indian Roads Congress;
4. Indian Building Congress;
5. Indian Institute of Bridge Engineers;
6. Indian Institute of Public Health Engineers;
7. Institute of Water Works

[6] Add any other Organization considered suitable.

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Items marked "N/A" do not apply in this Contract.

The following documents are also part of the Contract:

	Clause Reference
• The Schedule of Operating and Maintenance Manuals	[48]
• The Methodology and Program of Construction	[25]
• Site Investigation Reports	[14]
• The Schedule of Key and Critical Equipment to be deployed on the work as per agreed program of construction.	[25]

The Employer is :

Name: The commissioner
BBMP ,NR Square Bangaluru

Name of authorized Representative: Office of the Executive Engineer [1.1]
R.R.Nagara Division,
Mattikere near Chowdeshwari Bus stand
Bruhat Bangaluru Mahanagara Palike
Bangaluru. 560054

The name and identification number of the Contract is

Comprehensive Development of Roads and drains in ward No.16 Rajarajeshwarinagara Assembly Constituency under PACKAGE- 2019-20 RRN-DIV-(01).

SL NO	Name of the work
1	Comprehensive development of roads, drains and footpath in Khathanagara, Ayyappa nagara, HMT Factory surrounding main and cross roads and other surrounding roads in Jalahalli
2	Comprehensive development of roads and drains in Ward No. 16 of BBMP

The Works consist of **Comprehensive Development of Roads and drains in ward No.16 Rajarajeshwarinagara Assembly Constituency under PACKAGE- 2019-20 RRN-DIV-(01).**

1.1 The Start Date shall be the **Date of Issue of Notice to Proceed with the Work.**

1.1 The Project Site Location is given in Topographical Map.

The intended completion date for the whole of the works is 06 months with the following milestone

Mile stone Dates:
Physical works to be completed: period from the date of issue of Notice to proceed with the work

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Milestone 1 i.e 30% of Physical progress and Rs: 330.00 Lakhs Financial progress ... months from the date of work order

Milestone 2 i.e. 60% of Physical progress and Rs 660.00 Lakhs Financial progress ... months from the date of work order.

Milestone 3 i.e 100% of Physical progress and Rs . 1100.00 Lakhs financial progress ... months from the date of work order.

13.Insurance Requirements are as under.

Sl No	Type of Cover	Minimum cover for Insurance for ... months
(i)	Works and of Plant and Materials	The Sum stated in the Agreement plus 20%
(ii)	Loss or damage to equipment	Full Replacement Cost
(iii)	Loss or damage to property of Third Party	Full Replacement Cost
(iv)	Personal Injury or Death Insurance (a) for Third Party (b) for Contractor's Employees or Labour	Rs. 20.00 Lakh to cover 4 Persons @ Rs. 5.00 Lakh each. In accordance with the Statutory Requirements Applicable to Karnataka.

25. The Methodology and Program of Construction: within **10 Days from the Date of Entering into Agreement.**

25. The Schedule of Key and Critical Equipment to be deployed on the Work as per Agreed Program of Construction: **10 Days from the Date of Entering into Agreement.**

17, 26 The Liquidated Damages for the works (including monsoon) is as follows:

Milestone 1 i.e Rs.700/- per day
Milestone 2 i.e. Rs.700 /- per day
Milestone 3 i.e Rs. 800/- per day

41. The Liquidated Damages for the whole of the Works is Rupees 700 per day.

41.The Maximum amount of Liquidated Damages for the whole of the Works: **10% of Final Contract Price.**

49.2 The following Events shall also be fundamental breach of the contract:
1. The Contractor has contravened Clause 9 of CC.

50.1 The Percentage to apply to the Value of the Work not completed representing the Employer's Additional Cost for completing the Works shall be **30%.**

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SECTION 7: SPECIFICATIONS

For Specifications, all the Relevant Sections of MoRT&H [Specifications for Road and Bridge Works (Latest Editions)], all the Relevant IRCs and Special Publications (Latest Edition) shall be referred.

SECTION 8: DRAWINGS

Drawings are attached.

SECTION 9: BILL OF QUANTITIES

Bill of Quantities is given in Volume II.

Note:

1. Item for which no Rate or Price has been entered in will not be paid for by the Employer when executed and shall be deemed Covered by the other Rates and Prices in the Financial Bid (Refer ITT Clause 11.2 and CC Clause 37.2).
2. Unit Rates and Prices shall be quoted by the Tenderer in Indian Rupees.
3. Where there is a Discrepancy between the Rate in Figures and Words, the lower of the two will govern [Refer ITT Clause 24.1(a)].
4. Where there is a Discrepancy between the Unit Rate and the Line Item Total resulting from multiplying the Unit Rate by Quantity, the Unit Rate quoted shall govern [Refer ITT Clause 24.1 (b)].

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SECTION 10: FORMAT OF BANK GUARANTEE FOR PERFORMANCE

To:

The Executive Engineer
Rajarajeshwarinagara Division
Bruhat Bangalore Mahanagara Palike
Bangalore 560054

WHEREAS _____ [Name and Address of Contractor] (hereinafter Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ [name of Contract and Brief Description of Works] (hereinafter Contract");

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish with a Bank Guarantee by a recognized Bank for the sum specified therein as Security for compliance his Obligations in Accordance with the Contract.

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee.

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Contractor, upto a total of Rs._____ [Amount of Guarantee][5] Rupees_____ [in words] and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [Amount of Guarantee][6] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the Terms of the Contract or of the Works to be performed there under or of any of the Contract Documents which may be made between you and the Contractor shall in any way release us from any Liability under this Guarantee, and we hereby waive Notice of any such Change, Addition or Modification.

This Guarantee shall be valid until 30 days from the Date of Expiry of the Defect Liability Period of 36 months plus Claim Period of 6 months.

Signature and Seal of the Guarantor:
Name of Bank:
Address:
Date:

[5] An Amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract.

[6] An Amount shall be inserted by the Guarantor, representing the percentage of the Contract Price specified in the Contract.

SECTION 9: BILL OF QUANTITIES

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BRUHAT BANGALORE MAHANAGARA PALIKE

Name of the work:- Comprehensive Development of Roads and drains in ward No.16 Rajarajeshwarinagara Assembly Constituency under PACKAGE- 2019-20 RRN-DIV-(01).

"DRAFT TENDER SCHEDULE"

Sl No	Description of Items	Unit	Sanction		Quoted Rate in	
			Quantity	Rate	Figures	words
1	Removing & Refixing stone slabs of drains and pointing in C.M (1:3)complete as per the direction of Engineer in charge	Sqm	15544.40			
2	Excavation for road, drains and similar works KSRRB 300-1. Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per the direction of Engineer in charge	Cum	8482.26			
3	Plain cement concrete 1:3:6 mix with crushed stone aggregate 40 m nominal size mechanically mixed, placed in foundation and compacted by vibration including curing complete as per the direction of Engineer in charge	Sqm	216.18			
4	Providing and laying plain/reinforced cement concrete for side drains using M20 nominal mix concrete with OPC at 300 kgs. with 20mm and down size granite metal coarse aggregates at 0.69 cum and fine aggregates at 0.43 cum machine mixed, well compacted for walls and bottom including centering, shuttering, cost of materials, HOM of machinery, curing etc., complete excluding cost of steel as per MORTH specification No. 1500, 1700, 2200. including cost	Cum	643.83			

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